

CLAIMS

What is claimed is:

1. A method for authoring information relevant to a physical world, comprising:
 - detecting with an authoring device a first label associated with a first object; and
 - 5 triggering, in response to detecting, a system for authoring content;
 - wherein the content is to be unambiguously bound to the first object and is to be rendered on a playback device during detection of the first label.
2. The method as recited in claim 1, wherein the system for authoring content is resident
10 on the authoring device.
3. The method as recited in claim 1, wherein the authoring device and the playback device are integrated within a single apparatus.
- 15 4. The method as recited in claim 1, wherein the label is selected from a group consisting of a barcode label, a coordinate, a RFID tag, an IR tag, a time stamp, a text string, and a speech to text string.
5. The method as recited in claim 1, wherein the content is selected from a group
20 consisting of audio, text, image, and video.
6. The method as recited in claim 1, wherein the content is a link to a live agent.

7. The method as recited in claim 1, further comprising the steps of detecting a second label associated with a second object; triggering, in response to detecting, the system for authoring content which is unambiguously bound to the second object; and aggregating the content bound to the first object and the second object into a tour.

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8. The method as recited in claim 1, further comprising the step of detecting a second label associated with the first object and normalizing the first label and the second label such that the content bound to the first object can rendered during detection of either the first or second label in the playback mode.

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9. The method as recited in claim 1, further comprising the step of storing the content in non-volatile memory resident in the apparatus.

10. The method as recited in claim 1, further comprising the step of uploading the
15 content to a remote server.

11. The method as recited in claim 10, wherein the step of uploading is performed via a wireless network.

20 12. The method as recited in claim 10, wherein the step of uploading is performed via a wired network.

13. A computer-readable media having instructions for authoring information relevant to a physical world, the instructions performing steps comprising:

detecting a first label associated with a first object; and

triggering, in response to detecting, a system for authoring content to be

5 unambiguously bound to the first object;

wherein the content is to be rendered during detection of the first label by a device in a playback mode.

14. The computer-readable media as recited in claim 13, wherein the instructions

10 perform the further steps of detecting a second label associated with a second object;

triggering, in response to detecting, a system for authoring content to be unambiguously bound to the second object; and aggregating the content bound to the first object and the second object into a tour.

15 15. The computer-readable media as recited in claim 14, wherein the instructions

perform the further step of detecting a second label associated with the first object and normalizing the first label and the second label such that the content can rendered during detection of either the first or second label by the device in the playback mode.

20 16. A computer-readable media having instructions for authoring content to be

associated with objects in a physical world, the instructions performing steps comprising:

normalizing a read object label associated with an object into an object identifier;

placing the object identifier into a database;

accepting content to be rendered when the object label is read in a playback mode;
and
binding the content to the object identifier in the database.

5 17. The computer-readable media as recited in claim 16, wherein the instructions allow a plurality of different label types to be normalized to one object identifier.

18. A method for providing information relevant to a physical world, comprising:
detecting with a device a label associated with an object;
10 normalizing information contained in the detected label into an object identifier;
using the object identifier to search a database to find content bound to the object identifier; and
rendering the content.

15 19. The method as recited in claim 18, further comprising the step of retrieving the content bound to the object identifier from local memory in the apparatus.

20. The method as recited in claim 18, further comprising the step of retrieving the content bound to the object identifier from a remote server.

20 21. The method as recited in claim 18, wherein the content is selected from a group consisting of audio, text, image, and video.

23. The method as recited in claim 18, wherein the label is selected from a group consisting of a barcode, a coordinate, an IR tag, a RFID tag, a timestamp, a text string, and a speech to text string.

24. The method as recited in claim 18, wherein the content is a connection to a live agent.

25. The method as recited in claim 18, further comprising the step of determining the current time and comparing the current time to the timestamp before rendering the content.

26. The method as recited in claim 18, wherein the step of rendering the content comprises streaming the content from a remote server.

27. The method as recited in claim 18, further comprising the steps of accepting annotations/feedback after the rendering of the content and binding the annotations/feedback to the object identifier.

28. The method as recited in claim 27, further comprising the step of storing the annotations/feedback in local memory.

29. The method as recited in claim 27, further comprising the step of storing the annotations/feedback in a remote memory.

30. A computer-readable media having instructions for providing information relevant to a physical world, the instructions performing steps comprising:

detecting a label associated with an object;

normalizing information contained in the detected label into an object identifier;

5 using the object identifier to search a database to find content bound to the object identifier; and

rendering the content.

31. The computer-readable media as recited in claim 30, wherein the content is selected
10 from a group consisting of audio, text, and video.

32. A method for providing information relevant to a physical world, comprising:

storing an object identifier indicative of a plurality of read labels associated with an object into a database; and

15 using the database to bind content to the object identifier and, accordingly, the object;

whereby the content is renderable when any one of the plurality of labels is detected in a playback mode.

20 33. The method as recited in claim 32, wherein at least one of the plurality of labels is custom created.

34. The method as recited in claim 32, further comprising the step of attaching at least one of the plurality of labels to the object.

35. The method as recited in claim 32, wherein the plurality of labels is selected from a group consisting of a barcode label, a coordinate, a RFID tag, an IR tag, a time stamp, and a text string.

36. The method as recited in claim 32, further comprising the steps of detecting the plurality of labels.

37. A method for providing information relevant to a physical world, comprising:
 associating one or more labels with each of a plurality of objects in a tour;
 storing an object identifier indicative of the one or more labels associated with each of the plurality of object in the tour in a database;
 authoring content relevant to each of the plurality of objects in the tour; and
 binding the content to an object identifier in the database which corresponds to the relevant one of the plurality of objects in the tour whereby the content is renderable when the label is detected by a playback device without regard to the order in which the content was authored.

38. The method as recited in claim 37, wherein the labels are selected from a group consisting of coordinates, barcode labels, RFID tags, IR tags, timestamps, and text.

39. A system for authoring and retrieving selected digital multimedia information relevant to a physical world, comprising:

a plurality of machine readable labels relevant to the physical world;

an apparatus for detecting the machine readable labels and including

5 programming for normalizing information contained in the detected label into an object identifier; and

a digital multimedia library accessible by the apparatus storing content indexed by the object identifiers.

10 40. The system as recited in claim 39, wherein the apparatus further comprises a system for authoring digital multimedia in response to detecting one of the plurality of labels which is to be stored within the digital multimedia library and unambiguously bound to the object identifier.

15 41. The system as recited in claim 40, wherein the apparatus further comprises a system for rendering digital multimedia in response to detecting one of the plurality of labels, the digital multimedia rendered being the content unambiguously bound to the object identifier associated with a detected label.

20 42. The system as recited in claim 41, wherein the digital multimedia library includes one or more of audio files, visual image files, text files, video files, XML files, hyperlink references, live agent connection links, programming code files, and configuration information files.

43. The system as recited in claim 41, wherein the apparatus comprises programming that renders digital multimedia as a function of output capabilities of the apparatus.

5 44. The system as recited in claim 39, wherein the physical world comprises labeled locations containing labeled mobile objects.

45. The system as recited in claim 44, wherein the labeled locations are used to determine proximity of the labeled mobile objects.

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46. The system as recited in claim 39, wherein the digital multimedia library is stored on one or more computer servers external to the apparatus.

47. The system as recited in claim 46, wherein the digital multimedia library and the apparatus communicate via a wired network.

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48. The system as recited in claim 46, wherein the digital multimedia library and the apparatus communicate via a wireless network.

20 49. The system as recited in claim 48, wherein the wireless network comprises a cellular telephone network.

50. The system as recited in claim 39, wherein the digital multimedia library resides on the apparatus.

51. The system as recited in claim 39, wherein the apparatus accesses the digital multimedia library via the Internet.

52. The system as recited in claim 39, wherein the apparatus accesses the digital multimedia library via a voice portal.

53. The system as recited in claim 39, wherein the apparatus accesses the digital multimedia library via a cellular telephone voice mailbox.

54. The system as recited in claim 39, wherein the digital multimedia is aggregated into a tour.

55. The system as recited in claim 39, wherein the digital multimedia is randomly accessible by the apparatus.

56. The system as recited in claim 39, wherein the digital multimedia is accessible by the apparatus in a sequential order.

57. The system as recited in claim 39, wherein the apparatus comprises a personal digital assistant.

58. The system as recited in claim 39, wherein the apparatus comprises a cellular telephone.

59. The system as recited in claim 39, wherein the apparatus comprises purpose built
5 devices targeted to a specific application.

60. An apparatus for authoring information relevant to a physical world, comprising:
circuitry for detecting a label associated with an object; and
a system for authoring content to be unambiguously bound to the object as
10 represented by the detected label which content is to be rendered during detection of the
label in a playback mode.

61. The apparatus as recited in claim 60, wherein the circuitry comprises a barcode
reader.
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62. The apparatus as recited in claim 60, wherein the circuitry comprises an IR tag
reader.

63. The apparatus as recited in claim 60, wherein the circuitry comprises a RFID tag
20 reader.

64. The apparatus as recited in claim 60, wherein the circuitry comprises a keyboard for
inputting textual information.

65. An apparatus for authoring and providing information relevant to a physical world, comprising:

circuitry for detecting a label associated with an object; and

5 programming for normalizing information contained in the detected label into an object identifier;

a system for authoring content in an authoring mode which content is to be unambiguously bound to the object identifier; and

10 a system for rendering content in a playback mode, the content rendered being the content unambiguously bound to the object identifier associated with a detected label.

66. The apparatus as recited in claim 65, further comprising a communications link for downloading authored content to a remote location and for retrieving content from the remote location for rendering.

67. The apparatus as recited in claim 65, further comprising a memory for storing the content.

20 68. The apparatus as recited in claim 65, wherein the circuitry comprises a barcode reader.

69. The apparatus as recited in claim 65, wherein the circuitry comprises an IR tag reader.

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